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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/824,119	04/02/2001	Craig W. Hodgson	LITTONP.002C1	9187

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GROSSMAN, PATTI & BRILL  
300 W. WASHINGTON ST. #1200  
CHICAGO, IL 60606-2002

EXAMINER

CHANG, AUDREY Y

ART UNIT PAPER NUMBER

2872

DATE MAILED: 08/13/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/824,119

Applicant(s)

HODGSON ET AL.

Examiner

Audrey Y. Chang

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2872

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE \_\_\_\_ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 06 June 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

## DETAILED ACTION

### *Continued Examination Under 37 CFR 1.114*

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on June 6, 2002 has been entered.
2. This Office Action is also in response to applicant's amendment filed on June 6, 2002.
3. By this amendment, the applicant has amended claims 1, 4, 9-10 and has newly added claims 13-24.
4. Claims 1-24 remain pending in this application.
5. The rejection to claims 1-3, and 9-12 under 35 USC 112, first paragraph, set forth in the previous Office Action dated March 6, 2002, still holds.

### *Response to Amendment*

6. The amendment filed on June 6, 2002 is objected to under 35 U.S.C. 132 because it introduces new matter into the disclosure. 35 U.S.C. 132 states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows:

(1) claims 1 and newly added claim 18 recite that "each of the input couplers within any one of said z sensor groups (wherein z being 8) being connected to a different one of said m distribution fiber lines" and "each of said return fiber lines is connected to all output couplers within a respective one of said z sensor group (z being 8)". As demonstrated in claims 4A to 4H with sensor groups being 8, the input couplers are not connected to a different one of the distribution lines; in fact, two of the couplers are

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connected to the **same** distribution lines. Also each of the return fiber lines is **not** connected to **all** of the output couplers, rather each return fiber line only connects to **half of the number** of the output couplers.

(2) the newly added claims 22-24 recites "the  $n$  return fiber lines comprises one or more sets of said  $n$  return fiber lines" (in claim 22) and recites "the one or more sets of said  $n$  return fiber lines comprise one or more **pairs** of said  $n$  return fiber lines" (claim 23) that are not supported by the specification. The specification never discloses that the number of the return fiber lines is more than or less than 16. One or more sets of the  $n$  return fiber lines and the one or more pairs of  $n$  return fiber lines will make the number of the fiber lines **more than 16**.

Applicant is required to cancel the new matter in the reply to this Office Action.

*Claim Rejections - 35 USC § 112*

7. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

8. Claims 1-3 and 9-19 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for  $6 \times 16$  sensor array, does not reasonably provide enablement for  $m \times n$  sensor array. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the invention commensurate in scope with these claims.

The specification teaches the sensor array has  $6 \times 16$  configuration (having 6 distribution fiber lines and 16 return fiber lines) with *specific coupling ratios* but does not teach the sensor array may have other configurations and does not teach explicitly that the  $(6 \times 16)$  configuration may be generalized to an  $(m \times n)$  configuration with  $m$  and  $n$  assumes **any values** that is different from 6 and 16. In particular, the specification fails to teach the coupling ratios for these other configurations  $(m \times n)$ , which makes the

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other configurations inoperable since the coupling ratios are essential for the sensor array to be operable. The specification may have disclose the *6 x 16 sensor array* having 8 sensor groups and 12 sensors in each of the group or having 16 sensor groups and 6 sensors but both cases are having 6 distribution fiber liens and 16 return fiber lines. This means both cases are still classified as *6 x 16 sensor array* and therefore fails to give the support for the generalization to  $m \times n$  sensor array. Even with the demonstration of having 8 sensor groups or 16 sensor groups, the specification still does not give the support for generalization to a  $m \times n$  sensor array. Claims 2-3 and 9-19 inherit the rejection from their respective base claim.

9. **Claims 8 and 22-24 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.**

10. The reasons for rejection based on the newly added matters are set forth in the paragraphs above.

11. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

12. **Claims 4-8, 13 and 20 and 21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.**

The phrase "said  $m$  distribution lines" recited in claim 4 is indefinite since it lacks proper antecedent basis from earlier part of the claim. Claims 5-8 and 20 inherit the rejection from their based claim.

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The phrase "said output couplers in said sensor array" recited in claims 13 and 21 appears to be wrong and confusing since the coupling ratios are only determined on the basis of the number of sensors within a sensor group but not the whole array.

*Terminal Disclaimer*

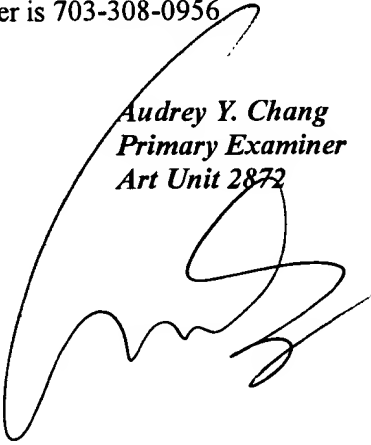
13. The terminal disclaimer filed on June 11, 2002 disclaiming the terminal portion of any patent granted on this application, which would extend beyond the expiration date of US Patent 6,249,622 has been reviewed and is accepted. The terminal disclaimer has been recorded.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Audrey Y. Chang whose telephone number is 703-305-6208. The examiner can normally be reached on Monday-Friday (8:00-4:30), alternative Mondays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cassandra Spyrou can be reached on 703-308-1637. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-7722 for regular communications and 703-308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956

Audrey Y. Chang  
Primary Examiner  
Art Unit 2872



A. Chang, Ph.D.  
August 8, 2002